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December 9, 2019

Illinois Environmental Protection Agency  
Bureau of Water  
Compliance Assurance Section, Mail Code #19  
1021 North Grand Avenue East  
Springfield, Illinois 62794-9276

Illinois Environmental Protection Agency  
DWPC Marion Region  
2309 West Main Street  
Marion, Illinois 62959

**Discharge Monitoring Report for November 2019  
(Permit No. 2015-EP-59681-1)  
Pump and Treat System  
Crab Orchard National Wildlife Refuge, Marion, Illinois**

Dear Sir or Madam:

AECOM, on behalf of the United States Fish and Wildlife Service (USFWS), is submitting the attached November 2019 Discharge Monitoring Report (DMR) for the subject treatment system located on the Crab Orchard National Wildlife Refuge (CONWR) in Marion, Illinois. This DMR has been prepared as required by the Permit to Construct, Own, and Operate (Permit No. 2015-EP-59681-1), dated April 28, 2017, for discharge to the City of Marion, IL publicly owned treatment works (POTW). Discharge of the treated effluent of the Pump and Treat System to the Marion POTW commenced on May 4, 2011. For the month of November 2019, the system operated the full duration of the month. The enclosed discharge summary was used to prepare the DMR.

Please contact Mr. Andy Day (314.429.0100) with any questions.

Sincerely,



Andy Day  
Environmental Scientist  
AECOM

**encl:** DMR  
Discharge Summary

**cc:** *(via electronic mail)*  
Viral Patel, USFWS  
Paul Lake, IEPA  
Mike Coffey, USFWS Project Coordinator  
Chuck Beasley, USFWS  
Brent Cain, City of Marion POTW

NAME USFWS  
 ADDRESS Crab Orchard National Wildlife  
 Refuge  
 8588 Route 148  
 Marion, IL 62599

## DISCHARGE MONITORING REPORT (DMR)


2015-EP-59681-1	to POTW
PERMIT NUMBER	DISCHARGE NUMBER

FACILITY Crab Orchard National Wildlife  
 LOCATION Refuge Superfund Site

MONITORING PERIOD							
YEAR		MO	DAY	TO	YEAR	MO	DAY
FROM 2019		11	01		2019	11	30

NOTE: Read instructions before

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow, Total Daily Volume	SAMPLE	5,385	6,329	gpd					0	Daily	Cont
	PERMIT REQUIREMENT	7,200	14,400							Daily	Cont
Flow, Daily Average Rate	SAMPLE	3.71	4.40	gpm					0	Daily	Cont
	PERMIT REQUIREMENT	Report	Report							Daily	Cont
pH, Standard Units	SAMPLE				6.98		6.98	s.u.	0	1/mo	Grab
	PERMIT REQUIREMENT				5.5		9.5			1/mo	Grab
Polychlorinated Biphenyls, total	SAMPLE				< 0.00044	< 0.00044	< 0.00044	mg/L	0	1/mo	Grab
	PERMIT REQUIREMENT						0.003			1/mo	Grab
	SAMPLE										
	PERMIT REQUIREMENT										
	SAMPLE										
	PERMIT REQUIREMENT										
	SAMPLE										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.		TELEPHONE		DATE		
			314	802.1141	2019	12	09
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA	NUMBER	YEAR	MO	DAY

## COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

Operated under the supervision of Andrew Day and Brooks Pfeiffer, Class K Operators - Crab Orchard Pump and Treat System

Crab Orchard National Wildlife Refuge  
Permanent Pump and Treat System  
Discharge Summary - November 2019  
AECOM Project Number: 60610517

November 2019	Flow (gpm)	Totalizer (gal)	Total Flow (gpd)	Effluent		Comments
				Total PCBs (mg/L)	pH (s.u.)	
11/1/2019	3.49	13,856,050	5,023			
11/2/2019	3.49	13,861,073	5,026			
11/3/2019	3.40	13,866,099	5,622			
11/4/2019	3.31	13,871,721	4,788			
11/5/2019	3.30	13,876,509	4,790			
11/6/2019	3.31	13,881,299	4,787			
11/7/2019	3.31	13,886,086	4,793			
11/8/2019	3.30	13,890,879	4,793			
11/9/2019	3.31	13,895,672	4,796			
11/10/2019	3.31	13,900,468	4,799			
11/11/2019	3.32	13,905,267	4,793			
11/12/2019	3.29	13,910,060	4,792			
11/13/2019	3.31	13,914,852	4,795			
11/14/2019	3.27	13,919,647	4,694			
11/15/2019	3.24	13,924,341	4,672			
11/16/2019	3.25	13,929,013	4,676			
11/17/2019	3.25	13,933,689	4,677			
11/18/2019	3.24	13,938,366	4,679			
11/19/2019	3.82	13,943,045	5,781	< 0.00044	6.98	
11/20/2019	4.30	13,948,826	6,223			
11/21/2019	4.31	13,955,049	6,244			
11/22/2019	4.37	13,961,293	6,312			
11/23/2019	4.40	13,967,605	6,324			
11/24/2019	4.40	13,973,929	6,319			
11/25/2019	4.40	13,980,248	6,329			
11/26/2019	4.37	13,986,577	6,269			
11/27/2019	4.30	13,992,846	6,184			
11/28/2019	4.29	13,999,030	6,183			
11/29/2019	4.26	14,005,213	6,135			
11/30/2019	4.33	14,011,348	6,248			
Data Summary	Flow (gpm)	Totalizer (gal)	Total Flow (gpd)	Effluent		Comments
				Total PCBs (mg/L)	pH (s.u.)	
Minimum	3.24	13,856,050	4,672	< 0.00044	6.98	
Average	3.71	13,929,537	5,385	< 0.00044	6.98	
Maximum	4.40	14,011,348	6,329	< 0.00044	6.98	

**Notes:**

gpm - gallons per minute  
gal - gallons  
gpd - gallons per day  
PCBs - polychlorinated biphenyls  
mg/L - milligrams per liter  
< - analyte not detected  
s.u. - standard units